



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/599,879

10/12/2006

Hardi Voelkel

WEBE-0021

5955

23550 7590 06/15/2009

HOFFMAN WARNICK LLC  
75 STATE STREET  
14TH FLOOR  
ALBANY, NY 12207

EXAMINER

VALONE, THOMAS F

ART UNIT

PAPER NUMBER

2831

NOTIFICATION DATE

DELIVERY MODE

06/15/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOCommunications@hoffmanwarnick.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/599,879	<b>Applicant(s)</b> VOELKEL ET AL.	
	<b>Examiner</b> THOMAS F. VALONE	<b>Art Unit</b> 2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 19-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lambert (6,724,324) in view of Kawahara (6,462,563).

Regarding claims 19, 27, 28, 35, 40, Lambert teaches a probe device for a capacitive position finding of a target object in which capacitive electrodes are arranged over a detection area (Fig. 1) on one side of the support as in claim 28. Lambert further teaches that the probe voltages are dependent on the spacing of the target object from a given probe and are evaluated for determining the position of the object (detect proximity, col. 4, line 23-45). Lambert uses a supply voltage across the coupling capacitor electrode (22, Fig. 1) and clearly forms capacitive voltage dividers (22 divided with 118 and output 112, Fig. 13, and 22 divided with 102, Fig. 13) with the probe voltages as mean voltages (4 Vrms, col. 13, line 65) being formed through the coupling capacitances and the capacitance of the probe to the environmental object position change to be detected (34, 22, Fig. 1 and 5). Lambert also teaches that the probe voltages are processed with an evaluating device (26, Fig. 1 and col. 4, line 43-45) to an output signal (30, Fig. 1) which is a measure of the position of the target object to be found (Fig. 17 and col. 10, line 53-65) as in claims 19, 35, 40. Lambert teaches the

Art Unit: 2831

plurality of capacitive probes are distributed on one side of a printed circuit board made of a dielectric over the detection area (Fig. 12) as in claims 27, 28, 40.

Lambert does not explicitly teach a plurality of capacitive probes though it can be broadly interpreted that the plurality of electrodes constitute a plurality of probes.

Kawahara from the same field of endeavor clearly teaches a plurality of capacitive probes (Xx, Yy, Fig. 1B, and Fig. 2C) as well as a capacitive voltage divider (col. 6, line 27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a plurality of capacitive probes as taught by Kawahara in the capacitive position device of Lambert for the benefit of obtaining a fingerprint pattern from the variation values of the probes as suggested by Kawahara (col. 3, line 15-20).

3. Regarding claim 20, Lambert does not teach the coupling capacitor as discrete capacitors.

Kawahara teaches the coupling capacitor as discrete capacitors (Ctr, col. 3, line 65 and Fig. 1b).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included discrete capacitors as taught by Kawahara as coupling capacitors in the Lambert capacitive position object finder for the benefit of being fabricated on the opposite sides of a dielectric layer as suggested by Kawahara (col. 4, line 64).

Art Unit: 2831

4. Regarding claims 21, 39, Lambert teaches a reference probe construction as the grounded electrode probe “held at ground potential” (70, Fig. 4) which serves as the reference potential for the probe, broadly interpreted as in claims 21, 39.

5. Regarding claim 22, Lambert includes a three-dimensional detection area as clearly seen in Figures 1 and 2. Lambert distributes the probes over the same three-dimensional detection area.

6. Regarding claim 23, Lambert teaches an inverter function being applied to each probe by the evaluating device and an integration function (col. 5, line 60-65) which is equivalent to a discrete rectifier since only a positive value is the output, as is well known to one of ordinary skill.

7. Regarding claims 24-26, Lambert teaches a two-channel input microprocessor (AD630, Fig. 14b) as in claim 24, which functions as a multiplexer with the two inputs as in claim 25, as is well known to one of ordinary skill. Lambert also teaches an analog pre-processor amplifier (col. 11, line 40-50 and 116, Fig. 13A) as in claim 26.

8. Regarding claim 29, Lambert teaches support as a printed circuit board (col. 11, line 1-40).

9. Regarding claim 30, the Examiner takes Official Notice that a flexible circuit board is a common off-the-shelf option well known in the prior art for phenolic or fiberglass circuit boards.

10. Regarding claim 31, Lambert teaches that at least parts of the electronics are placed on the support (col. 10, line 5-20, 30-45).

11. Regarding claim 32, Lambert does not teach a continuous metallic layer.

Art Unit: 2831

Kawahara teaches a continuous metallic layer for the potential surface (x,1 for example, Fig. 1B).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a Kawahara continuous metallic layer for the unitary potential surface electrode in Lambert's capacitive position finder for the benefit of applying a predetermined voltage uniformly as suggested by Kawahara (col. 4, line 20-30).

12. Regarding claims 33, 34, Lambert teaches another metal layer held at ground potential which is regarded as a shielding electrode to one of ordinary skill (col. 5, line 45-60) thus reducing edge effects, as taught by Lambert (front end shield, Fig. 14d) as in claim 33, with receiving circuit components on the support as in claim 34 (Fig. 12).

13. Regarding claim 36, Lambert teaches the method may be applied to a discrete object such as a person, foreign object, or human body part (col. 10, line 35-40).

14. Regarding claim 37, Lambert further teaches the coupling capacitances are supplied with the same supply voltage at a given frequency (10-100 kHz, col. 4, line 15-20).

15. Regarding claim 38, Lambert teaches quotients for evaluating probe signals (col. 6, 7, 8).

### ***Response to Arguments***

16. Acknowledgement is given for the amended drawings and claims. As a result, the objection to the drawings and the claims has been withdrawn.

Art Unit: 2831

17. Applicant's arguments filed 2/16/09 have been fully considered but they are not persuasive. Though the arguments are moot in view of the new grounds of rejection based on the claim amendments, the main arguments are still addressed below.

18. Regarding the argument that the coupling capacitance stays the same in the applicant's invention as compared to the Lambert reference, this feature is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

19. Regarding the argument that Lambert's sensor includes only one capacitive probe, depending on the interpretation of the term "probe", Lambert's can be viewed as one, two or three probes. Broadly interpreted, a capacitive probe certainly can also refer to a single electrode since only one electrode is most often probing closest to the target object at one time to one of ordinary skill. Also regarding the number of capacitive voltage dividers, Lambert clearly discloses two of them (22 and 102, Fig. 13 as well as 22 and 118, Fig. 13). In regards to the argued and claimed pluralities, "Mere duplication of parts has no patentable significance unless a new and unexpected result is produced" MPEP 2144.04 VI.B. *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

### ***Conclusion***

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 2831

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS F. VALONE whose telephone number is (571)272-8896. The examiner can normally be reached on Tu-W-Th, 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2831

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Diego Gutierrez/  
Supervisory Patent Examiner, Art Unit 2831  
/T. F. V./  
Examiner, Art Unit 2831

Thomas Valone  
Patent Examiner  
Art Unit 2831  
571-272-8896